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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,979	03/01/2002	David Robert Baldwin	TD-179	6300

29106 7590 01/16/2004

ROBERT GROOVER III  
11330 VALLEYDALE DR.  
DALLAS, TX 75230

EXAMINER

TUNG, KEE M

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/086,979

Applicant(s)

BALDWIN ET AL.

Examiner

Kee M Tung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

The amendment filed 12/22/03 has been considered in preparing this Office action.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 9, 13, 17, 21, 25, 29, 33 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Baldwin (6,025,853).

Baldwin teaches a graphics accelerator (Fig. 2E) comprising a plurality of specialized processing subunits (Fig. 2C), interconnected through a serial message-passing interface (the bus connects between these units) to provide a generally pipelined graphics accelerator architecture; at least one of said specialized processing subunits comprising multiple subprocessors connected to operate in parallel on separate tasks (col. 64, lines 39-40); a high bandwidth memory interface (Fig. 2B, Framebuffer Interface) independent of said serial message-passing interface which interfaces to a memory (frame buffer) of said graphics accelerator, said memory storing displayable pixel information (col. 6, lines 64-67); wherein said serial interface also permits downloading of image data to one of said subunits (col. 64, lines 30-35). Therefore, at least claims 1, 3, 9, 13, 17, 21, 25, 29, 33 and 37 are anticipated by Baldwin.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 4-8, 10-12, 14-16, 18-20, 22-24, 26-28, 30-32, 34-36 and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baldwin (6,025,853) in view of Manze et al (5,675,826 hereinafter "Manze").

The teachings of Baldwin are given in previous paragraph of this Office action. However, Baldwin fails to explicitly teach or suggest said memory interface accesses multiple tiles of pixels simultaneously. This is what Manze teaches (col. 1, lines 60-67). It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the teachings of Manze into the system of Baldwin in order to simultaneously access multiple memory blocks in the tiled memory unit and thus to provide improved access to larger arrays of pixel data as taught by Manze (col. 1, line 49 through col. 3, line 43). Therefore, at least claims 2, 4, 10, 14, 18, 22, 26, 30, 34 and 38 would have been obvious.

As per claims 5, 7, 11, 15, 19, 23, 27, 31, 35 and 39, the combined system fails to explicitly teach or suggest the size of the tiles of pixel. It would have been obvious to one of ordinary skill in the art at the time the present invention was made to modify the teachings of Baldwin and Manze in order to provide the design size (or shape) of the

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tiles of pixel in order to add flexibility and performance to the system. Therefore, at least claims 5, 7, 11, 15, 19, 23, 27, 31, 35 and 39 would have been obvious.

As per claims 6, 8, 12, 16, 20, 24, 28, 32, 36 and 40, the combined system fails to explicitly suggest or teach that the subunits include a current parameter unit, a vertex shading unit, a vertex machine unit, a cull unit and a geometry unit. It would have been obvious to one of ordinary skill in the art at the time the present invention was made to include all the subunits because these are just one of the graphics functions performing by the graphics pipelined stages in 3D graphics system, such as, for performing graphics transformation and lighting/shading functions among others in graphics system. Therefore, all the claims would have been obvious.

#### ***Response to Amendment***

5. The amendment to the specifications has not been entered because the original specification did not associate with paragraph No, such as, 0175 and 0212.

#### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kee M Tung whose telephone number is 703-305-9660. The examiner can normally be reached on Tuesday - Friday from 5:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 703-308-6829. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.



Kee M Tung  
Primary Examiner  
Art Unit 2676